DOCUMENT RESUME

ED 429 457 FL 025 809

AUTHOR Kling, Deborah; Zimmer, Kathryn G.
TITLE Weaving Curriculum Strands Together: Data Driven Results on the Implementation of an Interdisciplinary/Integrated Model for High School Reform.
PUB DATE 1999-00-00
NOTE 10p.; For related document, see ED 410 745.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Art Education; Change Strategies; Communication Skills; Creativity; Critical Thinking; Cross Cultural Studies; Curriculum Development; Educational Change; Ethical Instruction; Health Promotion; High Schools; Information Utilization; *Interdisciplinary Approach; Interpersonal Communication; Program Descriptions; *Second Languages; *Secondary School Curriculum; *Spanish; Well Being

ABSTRACT

This paper reports on a project to develop and implement an interdisciplinary, thematic high school curriculum combining instruction in Spanish language and four arts disciplines. Additional targeted skills included: accessing and using new information effectively; thinking critically about art; development of global responsibility and cross-cultural understanding; use of creativity; development of interpersonal skills, self-understanding, and ethical conduct; and establishment of personal wellness practices. The report describes the origins of the project, participating teachers and students, methods of evaluating project success, and study conclusions. It was found that the project had a positive effect on student achievement in language and art and persistence in Spanish language learning. Factors in the interdisciplinary classroom environment that facilitated achievement are also analyzed. Contains 19 references. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 429 457

WEAVING CURRICULUM STRANDS TOGETHER: DATA DRIVEN RESULTS ON THE IMPLEMENTATION OF AN INTERDISCIPLINARY/INTEGRATED MODEL FOR HIGH SCHOOL REFORM

Debbie Kling, Ed.D.

Kathy Zimmer, Ed.D.

St. Charles High School

1020 Dunham Road

St. Charles, IL 60174

630-443-2733

FAX 630-443-2769

kling@st-charles.k12.il.us

FL 025809

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

Debbie Kling ; K Zimmer

Deborah Kling, Ed.D.
Kathryn G. Zimmer, Ed.D.

DATA DRIVEN RESULTS ON THE IMPLEMENTATION OF AN INTERDISCIPLINARY/INTEGRATED MODEL FOR HIGH SCHOOL REFORM

Trailblazing conjures up images of an adventure that explores new frontiers and starts a journey into unknown territories. Six years ago, we embarked on a journey that challenged the very foundation on which high schools have functioned for an entire century. The new foundation we started to construct would support reasons to question our values, attitudes and beliefs about what successful secondary education looks like, sounds like and feels like.

Our trailblazing started as an opportunity to investigate, create, implement and evaluate an integrated course of study. The pilot project, designed to foster students' ability to discover through interconnecting, combined the disciplines of Spanish and art with an interdisciplinary thematic-centered curriculum. The class was called <<La Frontera>> which means "the border" because we crossed traditional borders of high school disciplines. The concept of <<La Frontera>> served as an early model for cross-discipline integration at the secondary level and our large, comprehensive, suburban high school. We knew that the integration of art with a beginning foreign language curriculum would create and cultivate interconnections, stimulate global awareness and help students make links to construct and connect their own learning. Exploring ways that our students might realize the diversity of their population and environment while at the same time achieve the high academic standards and outcomes was a key component in helping students acquire and integrate new knowledge (Marzano, 1993).
The value added bonus would be to introduce new integrated instructional strategies and provide our high school staff the opportunity of experiencing the combining of two distinct disciplines.

There are many routes to demonstrating competence in the traditional disciplines. Over the last decade, national standards in the K-12 curriculum areas have been established to define what students "know and are able to do". Linking disciplines to improve student learning seemed natural We looked at how the national standards (bulleted) for Spanish and art aligned with the our own school district's outcomes (italics) and questioned the effectiveness of continuing to instruct as separate subject, separate skill based traditional curricula:

Communicate effectively:

- to communicate in languages other than English
- to communicate at a basic level in the four arts disciplines
- communicate proficiently in at least one art form

Access and use information effectively:

- access new information

Think critically:

- develop and present basic analyses of works of art

Demonstrate global responsibility and cross-cultural understanding:

- gain knowledge and understanding of other cultures
- have an informed acquaintance with exemplary works of art from a variety of cultures and historical periods
- develop insight into own language and culture
- participate in multilingual communities and global society

Exhibit creativity:

- connect with other disciplines
- be able to relate various types of arts knowledge and skills within and across the arts disciplines
- to communicate at a basic level in the four arts disciplines
- communicate proficiently in at least one art form

Display interpersonal skills, self understanding and ethical conduct:

- develop insight into own language and culture
- participate in multilingual communities and global society

Develop and maintain personal wellness practices:

- develop physical well being
- nurture and foster emotional and mental states of well being

When our pilot was implemented six years ago, not many high schools were tinkering with alternative uses of time. Modifying our high school traditional scheduling structure by blocking the two periods, proved helpful in reducing interruption and class transition, further reducing the level of stress encountered by teachers and students. By combining the classes of Spanish and art, students and teachers had a longer and more meaningful time frame in which to apply knowledge presented and most importantly, demonstrate the above mentioned skills and behaviors. Students were exposed to the target language and art for a longer period of time. Increased class time nurtured the development of relationships with teachers and peers. Students had more time for group activities. The integrated curriculum provided time to apply skills and promoted authentic assessment and demonstrations of student responsibility and accountability. Simply, students were given additional time to process and reflect.

Need for the Program

Research (Beane, 1995, Fogarty, 1991, Jacobs, 1995) defined integrated curriculum is a wholistic approach to learning emphasizing connections and relationships rather than separate subject/separate skill-based learning. Integrated curriculum could be organized around themes and topics, essential questions, or

real-life issues; and included appropriate disciplinary knowledge, addressed the needs of learners, and reflected the real world. Earlier in the decade, individual school districts were dabbling in designing authentic tasks to reach desired outcomes that were relevant to students' lives by organizing curriculum around "major conceptual themes and strategic processes" (Willis, 1992). The district-intended learner outcome standards seemed to be the core of cross-curricular learning.

We examined Executive Summaries from the Community Unit School District 303 surveys indicating school reform efforts which needed to be addressed at the secondary level. To improve student learning there was a need to further promote:

- Interdisciplinary Teaming
- Realization of the District-Intended Learner Outcomes
- Analysis and Dissemination of Student Achievement Data

The combination of these three areas of emphasis constituted the foundation for this school improvement project: meaningful curricular interconnections through interdisciplinary teaming, clear measurable goals, and collection and analysis of performance data (Schmoker, 1996).

Attempting to manage this change initiative for our school improvement project, we enlisted the support of not only the teaching staff, but also our Board of Education, central office administrators, the high school leadership team and ultimately our community at large (Wood, 1989). Fullan (1990) believes that organizational change processes should influence both classroom improvement and school improvement through identifying and fostering a systemic link between the two. This interdisciplinary/integrated project model had the overall influence to impact these processes and goals while interfacing collegial activities across departmental lines.

Participants of <<La Frontera>>

Our journey started as a pilot project for one semester in the fall of 1993. The class was offered as a new curricular initiative with two teachers (one art and one Spanish) facilitating the class in the blocked class periods. During the fall, the teaching team garnered support through student and parent satisfaction surveys and administrative level endorsement. The curriculum renewal process led to course adoption as a two semester offering for the following year. The course was formally approved to combine Spanish I with the beginning art fundamentals program.

School year, 1994-1995, the first <<La Frontera I>> full year course was offered. During that year, the instructors observed that students were enthusiastic about constructing their knowledge in this interdisciplinary experience. Student satisfaction was high enough to result in administrative support for a second year class, <<La Frontera II>>. The course, approved as a full year offering to be implemented the following year, combined the disciplines of Spanish II and Graphic Design.

Over the next three years, class enrollments stabilized. The original two teachers recognized the strength of increasing the teaching team to four instructors. These additional pioneers were needed to participate in interdisciplinary team taught classes to facilitate the school improvement project. The added team members helped increase cross departmental and leadership support and endorsement for learning team situations.

Data Collection Process

Our initial gut reactions said that this was a "better way." On a day to day basis we started to see how this interdisciplinary class presented data that served as a foundation for reasons to challenge the foundation of high school curricular offerings and restructure our classes. Data collected through student surveys, analysis of documents, student journals, parent questionnaires, and student interviews answered two important research questions for the authors, the initial <<La Frontera>> teachers, who entered into doctoral research. To prove the effectiveness of this new cross-curricular course, the first question was:

> *Does the student in the interdisciplinary classroom demonstrate applicable, real-life, hands on achievement of the district outcomes Id. est. think critically, exhibit creativity, communicate effectively, develop and maintain personal wellness practices, use and access information effectively, demonstrate global responsibility and cross-cultural understanding, and display interpersonal skills, self-understanding and ethical conduct) as well as students in traditional classroom settings?*

The second question was:

> *Does the student in the interdisciplinary classroom demonstrate application and retention of curricular skills and knowledge?*

Our school improvement project, proved positive results in both declarative and procedural knowledge as well as performance based learner outcomes. Declarative knowledge demonstrated what our students knew or understood as students constructed meaning for their knowledge, organized and shaped that information so it was stored effectively and efficiently. Our students' procedural knowledge acquisition demonstrated how they constructed models through development of their artwork and artifacts which, in turn, helped shape and internalize their knowledge for meaningful recall and application (Marzano, 1993). Our evaluation information was drawn from multiple sources and included both quantitative and qualitative data.

The journey for this longitudinal study began in the year 1994, and continued through the year 1998 - spanning five school years. The <<La Frontera>> teaching

team disaggregated the students into three groups: traditional Spanish, traditional art and interdisciplinary Spanish/art <<La Frontera>> students. <<La Frontera>> students' curricular achievement in Spanish and art was compared to the traditional Spanish and art students' curricular achievement in the respective areas. Assessments of student performance included: performance-based measures, samples of student work, observations of student performance, spoken interviews, written performances, and student journals. Students' grades and enrollments were also compared from <<La Frontera I>>, <<La Frontera II>>, Spanish I, Spanish II, Spanish III, and traditional art courses.

Conclusions of the Study

Students in <<La Frontera>> provided evidence that an integrated curriculum does have a positive effect on student achievement. An interdisciplinary/integrated classroom situation improved student learning because:

(1) students felt that the classroom became a more diverse environment due to more student feedback and opinions that could be shared by all;
(2) students felt that they could receive individual help from at least one of the teachers most of the time during the class period;
(3) students saw teachers interacting with each other as a team recognizing that sometimes there are differing viewpoints that need to be addressed and worked through;
(4) the class was not boring, instead it was an active, social environment with many different instructional strategies occurring;
(5) two teachers with different backgrounds and different learning styles helped students learn and absorb the material in more constructive, complex and diverse ways;
(6) students recognized and applied the connections between disciplines;
(7) the blending of the two curricula made essential linkages which helped students construct their own meaning to their knowledge.

Our research indicated that Spanish students in <<La Frontera>> achieved, curricularly, as well as students in traditional Spanish classes. A larger proportion of former <<La Frontera>> students continued on to upper level Spanish classes than students who participated with a traditional Spanish classes, as evidenced by the Spanish III enrollments. This suggested that the <<La Frontera>> class instilled a greater love for Spanish language acquisition.

Students in <<La Frontera>> consistently demonstrated higher curricular achievement in art than students in traditional art classes. Induction of students into the National Art Honor Society showed an disproportionate number of <<La Frontera>> students. The juried annual art show, Artfest, indicated predominant proportions of <<La Frontera>> students' art work exhibited. Advanced Placement art enrollment, as selected by portfolio review and art department teachers, showed

significantly accelerated art achievement on the part of the <<La Frontera>> students.

Speech class grades showed that former <<La Frontera>> students have better communication skills and are better public speakers than students who have not taken <<La Frontera>>. Although there were fewer "A's" among the <<La Frontera>> students, the number of "B's" was significantly more than expected, and there were no "D's" or "F's". The communication practice in the integrated class that resulted from frequent performance based presentations prepared students to communicate effectively in speech, whether the language be Spanish or English.

The Learning through Technology Profile Tool (NCREL) served as a means by which to describe how different the <<La Frontera>> classroom was from traditional classrooms. Visitors to the <<La Frontera>> classroom identified that district outcome achievement was occurring on a much larger scale in the interdisciplinary classroom, as compared to traditional classrooms. This tool showed how discovery, thematic-based learning, promoted achievement of the seven outcomes: "Think Critically", "Exhibit Creativity", "Communicate Effectively", "Develop and Maintain Personal Wellness Practices", "Use and Access Information Effectively", "Demonstrate Global Responsibility and Cross-cultural Understanding", and "Display Interpersonal skills, Self-understanding and Ethical Conduct".

Teachers in interdisciplinary/integrated classroom situations also benefited from participation because teachers . . .

(1) made connections between the two disciplines;
(2) participated in a classroom environment where two teaching styles and two approaches to students interaction were presented;
(3) had a significant relationship with the students through developing a sense of community;
(4) brain stormed ideas of instructional and teaching strategies that focused on themes and concepts that were the strongest traits of both content areas;
(5) participated in a peer mentoring situation; and
(6) managed and manipulated flexible uses of time during the class period.

Our research indicated which type of learner is most successful in integrated classes. These learners were identified as students who:

(1) felt comfortable expressing their ideas in large groups,
(2) learned best in a community,
(3) were active learners,
(4) were self-starters and independent,
(5) devoted time to the subject outside of class,
(6) were hands-on in their approach,

(7) switched gears easily and
(8) naturally looked for connections and links between/among ideas.

After six years, our school improvement project continues to be a successful integrated curriculum model that demonstrates improved student learning. It can be used as a model to reconfigure different discipline teaming situations. The dynamics of integrated classrooms show student-centered environments that promote students making connections and linking their knowledge. Curriculum integration is a complex school reform process that generates significant rewards, both intrinsic and extrinsic, and produces a collaborative instructional environment that celebrates learning.

REFERENCES AND SELECTED READINGS

Beane, J. (1993, September). Problems and possibilities for an integrative curriculum. Middle School Journal, 25(1), 18-20.

Beane, J. (1995, April). Curriculum integration and the disciplines of knowledge. Phi Delta Kappan, April, 616-622.

Clark, Edward T. (1997) Designing and Implementing an Integrated Curriculum. Brandon, VT: Holistic Education Press.

Clark, John H., Agne, Russell M. (1997). Interdisciplinary High School Teaching. Boston: Allyn and Bacon.

Community Unit School District 303. (1995). Strategic Plan.

Community Unit School District 303. (1998). Strategic Plan.

Dempster, F., (1993, February). Exposing our students to less should help them learn more. Phi Delta Kappan, 74(6), 433-437.

Egol, M. (1994) Discovering schools of the future. St. Charles, IL: Arthur Andersen.

Fogarty, R. (1991) The mindful school: How to integrate the curricula. Palatine, IL: Skylight.

Fullan, M. (1993). Change forces: Probing the depths of educational reform. London: The Falmer Press.

Glickman, C. (1993). Renewing America's Schools San Francisco, CA Jossey-Bass, Inc.

Jacobs, H. (1995). Thematic interdisciplinary units. Alexandria, VA: Association for Supervision and Curriculum Development, 32-35.

Marzano, R., Pickering, D., & McTighe, J. (1993). Assessing student outcomes; Performance assessment using the Dimensions of Learning Model. Alexandria, VA: ASCD.

Schmoker, Mike. (1996) Results the key to continuous school improvment Alexandria, VA Association for Supervision and Curiculum Development.

Spies, Paul (1997). Interdisciplinary Teams for High Schools. Indiana: Phi Delta Kappa Educational Foundation.

Skarr, Michael W., ed. (1995). Learning through Technology: Study Group Framework and Profile Tool. IL: Illinois State Board of Education, NCREL.

Vars, G. (1991, October). Integrated curriculum in historical perspective. Educational Leadership, 49(2), 14-15.

Willis, S., (1992, November). Interdisciplinary learning: Movement to link the disciplines gains momentum. Curriculum Update. Alexandria, VA: Association for Supervision and Curriculum Development, 1-8.

Wood, (1989). Staff Development: A Handbook of Effective Practices, ASCD. Edited by sarah DeJarnette Caldwell. ,pgs., 26-43., Mainline Printing. , NSDC, Topeka, Kansas, chapter 2

COPYRIGHT KLING/ZIMMER, 1999